Total Magnetic Solutions™

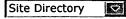# Properties of Alnico Magnets

- Magnetic Properties
- Magnetic Properties vs.Temperature
- Physical Properties

Alnico Contents

Search

Site Map

Magnet Design FAQs, Magnet Design Guide, calculation tools, and industry standards

Production of custom magnets and custom magnetic sub-assemblies

Site Directory

Magnetic Properties

Grade	B_r (Gauss)	H_c (Oersteds)	H_{ci} (Oersteds)	BH_{max} (MGOe)	Max. Op. Temp. (°C)	Relative Cost by Wt.
5 Cast	12,500	640	640	5.5	540	15
5-7 Cast	13,500	740	740	7.5	540	30
6 Cast	10,500	780	800	3.9	540	20
8 Cast	8,300	1,650	1,650	5.5	540	18
2 Sintered	6,600	550	550	1.4	540	8
5 Sintered	10,800	600	600	3.8	540	10
8 Sintered	7,000	1,900	1,900	5.0	540	10

Magnetic Properties vs.Temperature

Material	Reversible Temperature Cofficient of Br (% Change /°C)	Curie Temperature	Max. Service Temperature

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	1	("6693424").PN.	USPAT; USOCR	OR	OFF	2005/08/26 12:36
L2	1	1 and "L2"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/26 12:43
L3	1	1 and "2a"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/26 12:43
L4	2553	(324/207.2$).CCLS.	USPAT; USOCR	OR	OFF	2005/08/26 13:24
L5	92	4 and (magnet near (outside or external or separate))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/26 13:25
S1	1	("6414482").PN.	USPAT; USOCR	OR	OFF	2005/08/23 09:55
S2	1	("4983915").PN.	USPAT; USOCR	OR	OFF	2005/08/22 15:15
S3	1	S2 and stator and rotor and magnet	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/22 15:16
S4	2	("3194990").PN.	USPAT; USOCR	OR	OFF	2005/08/23 09:56
S5	2	("0163335").PN.	USPAT; USOCR	OR	OFF	2005/08/23 09:56
S6	0	("20020163335").PN.	USPAT; USOCR	OR	OFF	2005/08/23 09:57
S7	0	("10108182").PN.	USPAT; USOCR	OR	OFF	2005/08/23 09:57
S8	0	"10108182".an.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 09:57

S9	2	"20020163335".pn.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 10:23
S10	13135	rotor and stator and magnet and (sensor or detect$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 10:42
S11	4464	cylindrical and S10	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 10:43
S12	2562	cylinder and S10	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 10:43
S13	5448	S11 or S12	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 10:25
S14	43168	rotation adj angle	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 10:25
S15	318	S13 and S14	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 13:53
S16	844	magnet and (sensor or detector or hall) and gap and (rotation adj angle)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 13:53
S17	2553	(324/207.2$).CCLS.	USPAT; USOCR	OR	OFF	2005/08/26 13:24

S18	62	S16 S17	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/08/23 14:11
S19	782	S16 not S18	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 14:11
S20	434	S19 and (cylinder or cylindrical)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 14:13
S21	22954809	@ad<="20020930"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 14:13
S22	310	S20 S21	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/08/23 14:14
S23	170	S22 not (optic or optical)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 14:46
S24	87	S22 not coil	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 14:46
S25	46	S24 not S23	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/23 16:43
S26	1	("4999531").PN.	USPAT; USOCR	OR	OFF	2005/08/23 17:12
S27	2	("2920179").PN.	USPAT; USOCR	OR	OFF	2005/08/23 17:13

S28	13135	rotor and stator and magnet and (sensor or detect$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 10:42
S29	13135	rotor and stator and magnet and (sensor or detect$4)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 10:43
S30	4464	cylindrical and S29	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 10:43
S31	2562	cylinder and S29	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 10:43
S32	5448	S30 S31	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 10:44
S33	71	S32 and (first adj magnet) and (second adj magnet)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 11:02
S34	8	S33 and (third adj magnet)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 10:50
S35	63	S33 not S34	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 11:01

S36	1	S35 and (rotation adj angle)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 11:02
S37	9	(rotation with angle) and (first adj magnet) and (second adj magnet) and (third adj magnet) and gap and (sensor or detector)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 11:07
S38	2	ep-1065473-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 11:12
S39	1	de-19634281-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 11:15
S40	19192	makino.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 11:15
S41	165	makino-masahiro.in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 11:22
S42	1	("6693424").PN.	USPAT; USOCR	OR	OFF	2005/08/24 11:23
S43	1	"6268722".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:23
S44	1	"5798639".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:24
S45	1	"6268722".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:24
S46	1	"6356073".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:24
S47	1	"6414482".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:24
S48	1	"6448762".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:26

S49	1	"6476600".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:27
S50	1	"6501265".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:27
S51	1	"6559637".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:27
S52	9	("5459399" | "5798639" | "6268722" | "6356073" | "6414482" | "6448762" | "6476600" | "6501265" | "6559637").PN.	US-PGPUB; USPAT; USOCR	OR	ON	2005/08/24 11:28
S53	1	"5798639".PN.	USPAT; USOCR	OR	ON	2005/08/24 11:29
S54	0	("6693424").URPN.	USPAT	OR	ON	2005/08/24 11:30
S55	0	jp-2001004315-$.did.	USPAT	OR	ON	2005/08/24 15:32
S56	5847	rotor and stator and (plurality of magnets) and gap and (sensor or detector)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:19
S57	382	S56 and (rotation adj angle)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:34
S58	0	S57 and (plurality adj of adj magnets)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:34
S59	110	rotor and stator and (plurality of magnets) and gap and (sensor or detector)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	AND	ON	2005/08/24 15:40
S60	0	rotor and stator and (plurality of magnets) and gap and (sensor or detector)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2005/08/24 15:41
S61	6956	rotor and stator and gap and (sensor or detector)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	ADJ	ON	2005/08/24 15:43

S62	283	S61 and (plurality near magnets)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:47
S63	3	S62 and (first adj magnet) and (second adj magnet) and (third adj magnet)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:46
S64	5	S62 and (second adj magnet) and (third adj magnet)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:46
S65	2	S64 not S63	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:46
S66	277	S62 not gyroscope	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:48
S67	211	S66 not pump	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:48
S68	206	S67 not impeller	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:49
S69	201	S68 not levitation	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 15:49

S70	199	S69 not (tape adj player)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:29
S71	134	S70 and (cylinder or cylindrical)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:29
S72	15	S71 not motor	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 16:42
S73	119	S71 not S72	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 16:51
S74	119	S73 not levitator	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:23
S75	119	S74 not levitate	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 16:52
S76	169602	gap and (sensor or detector)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:20
S77	135386	((rotation near angle) near (detector or sensor)) or (position adj sensor) or (position adj detector)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:25

S78	16184	S76 and S77	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:22
S79	5139	S78 and magnets	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:22
S80	3749	S79 not (levitator or levitate or levitation or gyroscope or pump or (brush$1less adj motor))	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:23
S81	7131	((rotation near angle) near (detector or sensor)) or ((position adj sensor) or (position adj detector)) and S80	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:26
S82	3749	(((rotation near angle) near (detector or sensor)) or ((position adj sensor) or (position adj detector))) and S80	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:28
S83	3694	S82 not (shimomura or nakamura or takeda or kono or kawashima or hamaoka).in.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:28
S84	1820	S83 and (cylinder or cylindrical)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:29
S85	1819	S84 not (tape adj player)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:30

S86	1804	S85 not (tape adj head)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:31
S87	1484	S86 and @ad<="20020930"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:33
S88	1472	S87 not (fuel adj inject44 or coin)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:34
S89	1410	S87 not ((fuel adj inject$4) or coin)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:35
S90	1165	S89 not (lens or camera)	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:36
S91	837	S90 not optical	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/24 17:36
S92	1	("6414482").PN.	USPAT; USOCR	OR	OFF	2005/08/25 17:49
S93	0	S92 and ("Fig." adj "25")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:49
S94	0	S92 and ("Fig.25")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:50

S95	0	S92 and ("Fig25")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:50
S96	0	S92 and ("fig25")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:50
S97	0	S92 and ("fig.25")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:50
S98	0	S92 and ("fig. 25")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:51
S99	1	S92 and ("25")	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:53
S100	2	("2842482").PN.	USPAT; USOCR	OR	OFF	2005/08/25 17:54
S101	24	"2842482"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:55
S102	0	"jp-19982842482-$.did."	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:57
S103	0	jp-19982842482-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:55

S10 4	0	jp19982842482-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:55
S10 5	0	jp19982842482$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:56
S10 6	0	jp-19982842482$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:56
S10 7	0	jp-19982842482-.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:56
S10 8	0	"jp-b2-842482-$.did."	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:58
S10 9	0	"jp-842482-b2.did."	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:58
S11 0	0	"jp-2842482-B2.did."	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:58
S11 1	0	"jp-19982842482-B2.did."	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/25 17:58
S11 2	0	("2003670214").PN.	USPAT; USOCR	OR	OFF	2005/08/26 11:22

S11 3	0	"2003670214"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/26 11:23
S11 4	15	"670214"	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/26 11:24
S11 5	0	ep-200321948-$.did.	US-PGPUB; USPAT; USOCR; EPO; JPO; DERWENT; IBM_TDB	OR	ON	2005/08/26 12:36